IN THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method comprising:

evaluating one or more source characters ~~using a lookup table~~ to determine ~~whether each character will invert or maintain a current~~ an intermediate running disparity for each of the one or more source characters; and

determining a running disparity for each of the one or more source characters before encoding the one or more source characters based on ~~the~~ a current running disparity associated with the one or more source characters and ~~whether~~ the ~~character will invert or maintain the current~~ intermediate running disparity of each of the one or more source characters.

2. (Currently amended) The method of claim 1, wherein evaluating the one or more source characters comprises evaluating each of the one or more source characters to determine a flip/hold bit based on whether ~~the~~ a respective source character will invert or maintain a ~~the~~ current running disparity.

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3.   (Currently amended) The method of claim 2, wherein determining ~~a~~ the running disparity for each of the one or more source characters comprises comparing the flip/hold bit of ~~each~~ the respective source character with the current running disparity.

4.   (Currently amended) The method of claim 3, wherein determining ~~a~~ the running disparity for each character comprises using an exclusive or (XOR) function to compare the flip/hold bit with the current running disparity.

5.   (Canceled).

6.   (Currently amended) The method of claim 1, wherein evaluating the one or more source characters comprises using one or more logic gates to determine whether each of the one or more source characters will invert or maintain the current running disparity.

7.   (Currently amended) The method of claim 1, further comprising passing the current running disparity, the running disparity of each of the one or more source characters, and ~~along with~~ the ~~associated~~ one or more source characters to

an encoder to encode the <u>one or more</u> source character<u>s</u> into ~~a~~ <u>one or more</u>

transmission character<u>s</u>.

8.   (Currently amended) A circuit comprising:

a decoder to determine a flip/hold bit <u>for each of a plurality of source</u>

<u>characters</u> ~~using a lookup table~~ based on whether a <u>respective</u> source character will

invert or maintain a current running disparity <u>associated with the plurality of source</u>

<u>characters</u>; and

a comparator coupled to the decoder to compare the flip/hold bit with the

current running disparity to determine a running disparity for the <u>respective</u> source

character before the <u>respective</u> source character is encoded.

9.   (Original) The circuit of claim 8, wherein the comparator comprises one or

more exclusive or (XOR) gates.

10.   (Original) The circuit of claim 8, wherein the comparator comprises a pre-

calculator to pre-calculate at least a portion of the running disparity.

11.   (Original) The circuit of claim 10, wherein the pre-calculator comprises one or

more exclusive or (XOR) gates.

12. (Currently amended) The circuit of claim 8, further comprising an encoder coupled to the comparator to receive the current running disparity, a plurality of running disparities of the plurality of source characters, and the ~~associated~~ plurality of source characters and to encode the plurality of source characters to a plurality of transmission characters.

13. (Original) The circuit of claim 12, wherein the encoder is an 8B/10B encoder that does not contain disparity calculation circuitry.

14. (Currently amended) An apparatus comprising:

means for evaluating one or more source characters to determine an intermediate running disparity for each of the one or more source characters ~~a flip/hold bit based on whether each source character will invert or maintain a current running disparity, wherein the means for evaluating the one or more source characters comprises one or more lookup tables~~; and

means for ~~comparing the flip/hold bit of each source character with the current running disparity to determine a running disparity for each source character~~determining a running disparity for each of the one or more source characters based on a current running disparity associated with the one or more

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source characters and the intermediate running disparity of each of the one or more

source characters before the source character is encoded.

15. (Currently amended) The apparatus of claim 14, wherein the means for

determining the running disparity for each of the one or more source characters

comprises means for comparing the~~a~~ flip/hold bit with the current running

disparity ~~comprises one or more exclusive or (XOR) gates~~.

16. (Currently amended) The apparatus of claim 14, wherein the means for

~~comparing the flip/hold bit with the current running disparity~~determining the

running disparity for each of the one or more source characters comprises means

for pre-calculating at least a portion of the running disparity.

17. (Canceled).

18. (Original) The apparatus of claim 14, wherein the means for evaluating the

one or more source characters comprises one or more logic gates to determine

whether each source character will invert or maintain the current running

disparity.

19.   (Currently amended) The apparatus of claim 14, further comprising an

encoder coupled to the ~~comparing~~ means for determining the running disparity

for each of the one or more source characters to receive the current running

disparity, the running disparity for each of the one or more source characters,

and the ~~associated~~ one or more source characters and to encode the one or more

source characters to ~~a~~ one or more transmission characters.

20.   (Original) The apparatus of claim 19, wherein the encoder is an 8B/10B

encoder that does not contain disparity calculation circuitry.

21.   (New) The method of claim 1, wherein evaluating the one or more source

characters comprises using a lookup table to determine whether each of the one

or more source characters will invert or maintain the current running disparity.